DR. ASIF ALI SHAIKH

Department of Basic Sciences and Related Studies,
Mehran University of Engineering and Technology,
Jamshoro, Pakistan
Tel.:   +92-3342005889
Email: asiflali_1968@hotmail.com
Official Email: asif.shaikh@faculty.muet.edu.pk

Academic Qualifications

PhD Mathematics (2015): *Institute of Mathematics and Computer Sciences, University of Sindh, Jamshoro, Pakistan.*
Title of Thesis: "Numerical Simulation of Blood Flow past Irregular Solid Obstacles (Blood Clotting) through Veins/Arteries"
MPhil Mathematics (2007): *Institute of Mathematics and Computer Sciences, University of Sindh, Jamshoro, Pakistan.*
Title of Thesis: "Finite Element Simulation of a Non-Newtonian Fluid past an Irregular Cylinder"
This course was split into two parts, two semester course work and remaining dissertation. Course work included following subjects:
Mathematical Analysis, Advanced Differential Geometry and Tensor, Research methodology, Advance Numerical Analysis, Optimization techniques, Operations Research, Finite Element methods.
M.Sc. Mathematics (1991): *Institute of Mathematics and Computer Sciences, University of Sindh, Jamshoro, Pakistan.*
This was a purely course work. This degree exposed me to the subjects including Computer Programming (FORTRAN), Numerical Analysis, Mathematical Statistics, Linear Programming and Operational Research, Methods of Mathematical Physics, Fluid Mechanics, Functional Analysis, Optimization, Econometrics, Rings and Fields, Differential Geometry and Integral Equations.
B.Sc. Mathematics (1989): *Institute of Mathematics and Computer Sciences, University of Sindh, Jamshoro, Pakistan.*
This was a three year bachelor's degree program comprising the subjects: Physics, Applied Mathematics, Real Analysis, Algebra, Complex Analysis, Analytical Dynamics, Differential Equations, Differential Geometry, Measure Theory, Numerical Methods and Algebraic Topology.

Academic Experience

Research Assistant (1992 -1998): *Department of Basic Sciences, Mehran University of Engineering and Technology, Jamshoro, Sindh, Pakistan.*

I have been teaching various subjects of Engineering Mathematics to undergraduate students of this university. The courses taught during this period include Applied Calculus, Linear Algebra, Analytical Geometry, Differential Equations, Laplace Transforms, Complex Variables, Numerical Analysis with Computer Applications, and Introduction to Computers.

Lecturer (BPS-18) 1998- 2007: *Department of Basic Sciences and Related Studies, Mehran University of Engineering and Technology, Jamshoro, Sindh, Pakistan.*

I have been teaching various subjects of Engineering Mathematics to undergraduate students of this university. The courses taught during this period include Applied Calculus, Linear Algebra, Analytical Geometry, Differential Equations, Laplace Transforms, Complex Variables, Numerical Analysis with Computer Applications, and Introduction to Computers.

Assistant Professor (BPS-19) 2007-Present: *Department of Basic Sciences and Related Studies, Mehran University of Engineering and Technology, Jamshoro, Sindh, Pakistan.*

I have been teaching various subjects of Engineering Mathematics and Computer Programming to undergraduate students of this university. Courses taught during this period include Computational Mathematics, Numerical Analysis, FORTRAN Programming, and C ++ Programming.

Computer and Programming Skills

1. Computer programming in FORTRAN 90/95, C++.
2. Working experience with Mesh Generation Software's.
3. Working experience with Windows NT/2000/XP/7, LINUX and Microsoft office.
4. Excellent command on the usage of Internet.

Author/Co-Author/ Editor of Books

1. Applied Calculus
2. Linear Algebra and Numerical Methods
3. Numerical Analysis and Computer Programming
4. Statistical Methods and Estimations
5. Differential Equations and Fourier Series (Editor)

Research Interests

1. Computational Fluid Dynamics
2. Partial differential equations
3. Ordinary differential equations
4. Transformation techniques
5. Numerical Analysis
6. Fractional Differential and Integral Equations

Publications

1. Shah, S.S., Chandio, M.S., Shah, F. and **Shaikh, A.** (2008), "Numerical Simulations of viscoelastic stretching at constant pulling velocity", Sindh University Research Journal, 40(01), 79-86 (2008).

2. **A.A Shaikh**, F. Shah, M. S. Chandio, "Finite Element Simulation Of Newtonian Flows Past An Irregular Solid Obstacle." Sindh University Research Journal, 41(02), 93-98 (2009)

3. K. A. Abro, **A.A Shaikh**,and Sanaullah Dheraj "Exact solutions on the Oscillating Plate of Maxwell Fluids" Mehran University Resarch Journal of Engineering and Technology,volume 35,NO.1,January,2016[p-ISSN:0254-7821,e-ISSN:2413-7219]

4. **A.A Shaikh,** S. Qureshi. M. S. Chandio, "Minimum Error Bounds For Local Truncation Errors To Iteratively Scalar And Vector-Valued ODEs." Sindh University Research Journal, 47(03), 545-548 (2015).

5. K. A. Abro, **A.A Shaikh**, I. A. Junejo, "Analytical Solutions Under No Slip Effects For Accelerated Flows of Maxwell Fluids" Sindh University Research Journal, 47(03), 613-618 (2015).

6. S. Qureshi, **A.A Shaikh**, M. S. Chandio, "Critical study of a nonlinear Numerical Scheme for initial value problems", Sindh University Research Journal, 47(04), 693-698 (2015)

7. Z-U-N. Memon, M. S. Chandio, N. J. Rajpar, S. F. Shah, S. Qureshi, **A.A. Shaikh**, "On Local Error Bound Of A Modified Ordinary Differential Equation Solver" Sindh University Research Journal, 46(03), 363-368 (2014).

8. **A.A Shaikh**, F. H. Chandio, S. Qureshi, "Computation Of Wall Shear Stresses Across Various Stenosis Length In Common Carotid Artery " Sindh University Research Journal, 47(02), 367-370 (2015).

9. A. W. Mahesar, F. H. Chandio, **A.A Shaikh**, H. F. Naqvi, Q. U. A. Nizamani, M.R.Wahiddin, "Topological Structure of Complex Networks And Its Importance In Diffucion" Sindh University Research Journal, 47(02), 191-194 (2015).

10. **A.A Shaikh**, M. S. Chandio, "Computation Of Blood Flow Separation And Reattachment Length On Stenosis Artery Using Finite Element Method", Sindh University Research Journal, 46(04), 423-428 (2014).

11. S. Qureshi, **A.A Shaikh**, M. S. Chandio, "A New Iterative Integrator For Cauchy Problems", Sindh University Research Journal, 45(03), 628-633 (2013).

12. K. B. Amur, S, F. Shah, **A. A. Shaikh**, "An Adaptive Control For Tikhonov Regularization On Unstructured Grid For A Variational Denoising Problem", Sindh University Research Journal, 45(03), 553-558 (2013).

13 UBAIDULLAH YASHKUN,S. F. Shah, **A. A. Shaikh** and M. S. Chandio, "Blood Flow simulation in Carotid artery Bifurcation using fnite element Method, Sindh University Research Journal, 45(03), 622-627 (2013).

14 Sania Qureshi, Muhammad Saleem Chandio, Ishtiaque Ahmed Junejo, **Asif Ali Shaikh**, Zaib-un-Nisa Memon, "On Error Bound For Local Truncation Error Of An Explicit Iterative Algorithm In Ordinary Differential Equations" Sci.Int. (Lahore), 26(4), 1413-1415, (2014).

15 Kashif Ali Abro, **Asif Ali Shaikh** "Exact Analytical Solutions For Maxwell Fluid Over An Oscillating Plane" Sci.Int. (Lahore), 27(2), 923-929, (2015).

16 A.Latif Memon, K. B. Amur, **Asif Ali Shaikh**," SNR And BER Models And The Simulation For BER Performance Of Selected Spectral Amplitude For OCDMA", Mehran University Research Journal of Engineering and Technology, 33(1), 103-112 (2014)

17 Zaib-un-Nisa Memon, Sania Qureshi, **Asif Ali Shaikh**, Muhammad Saleem Chandio, "A Modified Ode Solver For Autonomous Initial Value Problems" Mathematical Theory and Modeling, Vol. 4(3), 80-85(2014)

18 Sania Qureshi, Zaib-un-Nisa Memon, **Asif Ali Shaikh**, Muhammad Saleem Chandio, "On The Construction And Comparision Of An Explicit Iterative Algorithm With Nonstandard Finite Difference Method" Mathematical Theory and Modeling, Vol. 3(13), 78-87(2013)

19 Sania Qureshi, Zaib-un-Nisa Memon, **Asif Ali Shaikh**, Muhammad Saleem Chandio, "Analysis Of Accuracy ,Stability,Consistency And Convergenceof An Explicit Iterative Algorithm" Mathematical Theory and Modeling, Vol. 4(1), 01-10 (2014).

20 W. A. Shaikh, **A. A. Shaikh**, K. B. Amur, M. Memon, "Unprimitive Groups Of Degree ½ n(n+1)" Quaid-e-Awam University Research Journal of Engineering, Science and Technology, 12(2), 26-28 (2013)

21 A.A.SANGAH, **A.A.SHAIKH**, S.F.SHAH, "Comparative study of existing bracketing methods with modified Bracketing Algorithm for solving non linear equations in single variable , Sindh University Research Journal, 48(01), 171-174 (2016)

22 N.LEGHARI,V.K.OAD,A. **A.SHAIKH**, A.A.SOOMRO, "Analysis Of consumption, tractor operating speed and its wheel slippage" Sindh University Research Journal, 48(01), 37-40 (2016)

23 S. ABRO, M. A. SOLANGI, **A. A. SHAIKH,** An Investigation on the Performance of Students in Mathematics: A Case Study. *Sindh Univ. Res. Jour. (Sci. Ser.) Vol. 48 (2) (2016)*

24 Ravi Kumar, **Asif Ali Shaikh**, Shakeel Ahmed Kambho, "Effect of the different factors on the relaxation parameters of SOR gauss-seidel method " Sci.Int. (Lahore), 28(3),2189-2194, (2016).

Conferences Attended

1. "Analysis of Coarse and dense meshes through numerical Simulation of non-Newtonian fluids past solid obstacle" Asif **Ali Shaikh**[1,2], Syed Feroz Shah[2], M. Saleem Chandio[3].
   The 2008 WSEAS 8th International Conference on Simulation modelling and Optimization. *Santendar, Cantaberia, Spain, 23-25 September, 2008*

2. "*Study of Newtonian and non-Newtonian fluids through numerical simulation of Reverse Roller Coating flows with free surface*" Feroz Shah Syed[1,2], **Asif A. Shaikh**[2], M. Saleem Chandio[3], Zahid Mehmood[4] and Hua-Fei Sun[1]
   The 2010 International Conference on Chemical Engineering and Applications (CCEA 2010) *Singapore, 26-28 February, 2010, pp. 1-5*

3. "Comparson through Numerical Simulation of a non-Netonian fluid past obstacle of different shapes" **Asif Ali Shaikh**[1,2], Syed Feroz Shah[2], M. Saleem Chandio[3].
   The 2011 ICMAAE) International Conference on Mechanical, Automotive and Aerospace Engineering, May17-19,2011, *Legend Hotel,Kuala Lumpur,Malaysia*

References

Excellent references are available at request.